



Glyco-Enzyme mRNA Expression in Gliomas

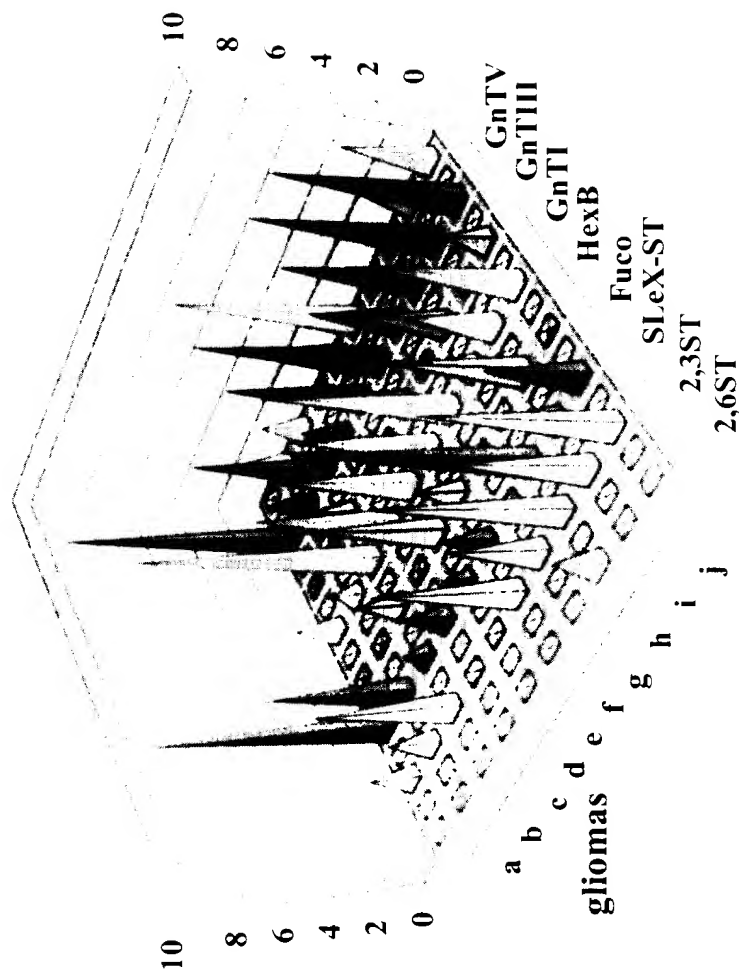


FIGURE 1



Glyco-Enzyme mRNA Expression in Meningiomas

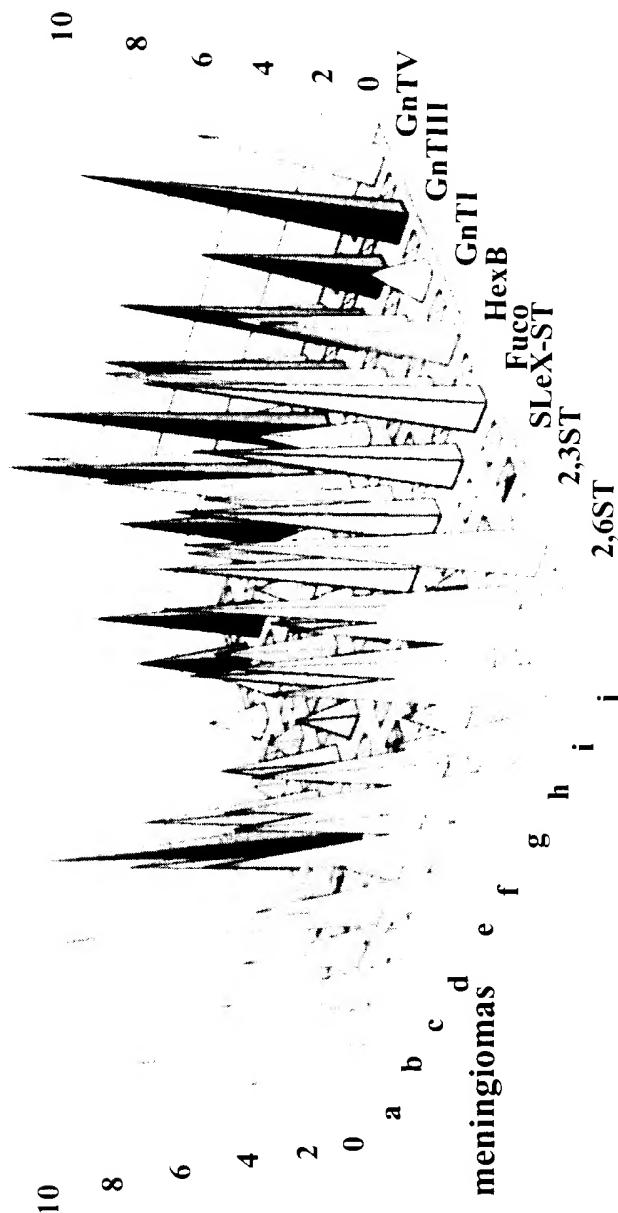


FIGURE 2



Transcriptional Regulatory Region	Nucleic Acid Encoding Glycosyltransferase
Examples of Transcriptional Regulatory Regions	Nucleic Acid Encoding Glycosyltransferase
CMV immediate-early enhancer/promoter	α 2,6-ST
SV40 early enhancer/promoter	α 2,3-ST
JC polyomavirus promoter	SLex-ST
Chicken β -actin promoter coupled to the CMV enhancer	Fuco
	HcxB
	GnTI
	GnTIII
	GnTV

FIGURE 3

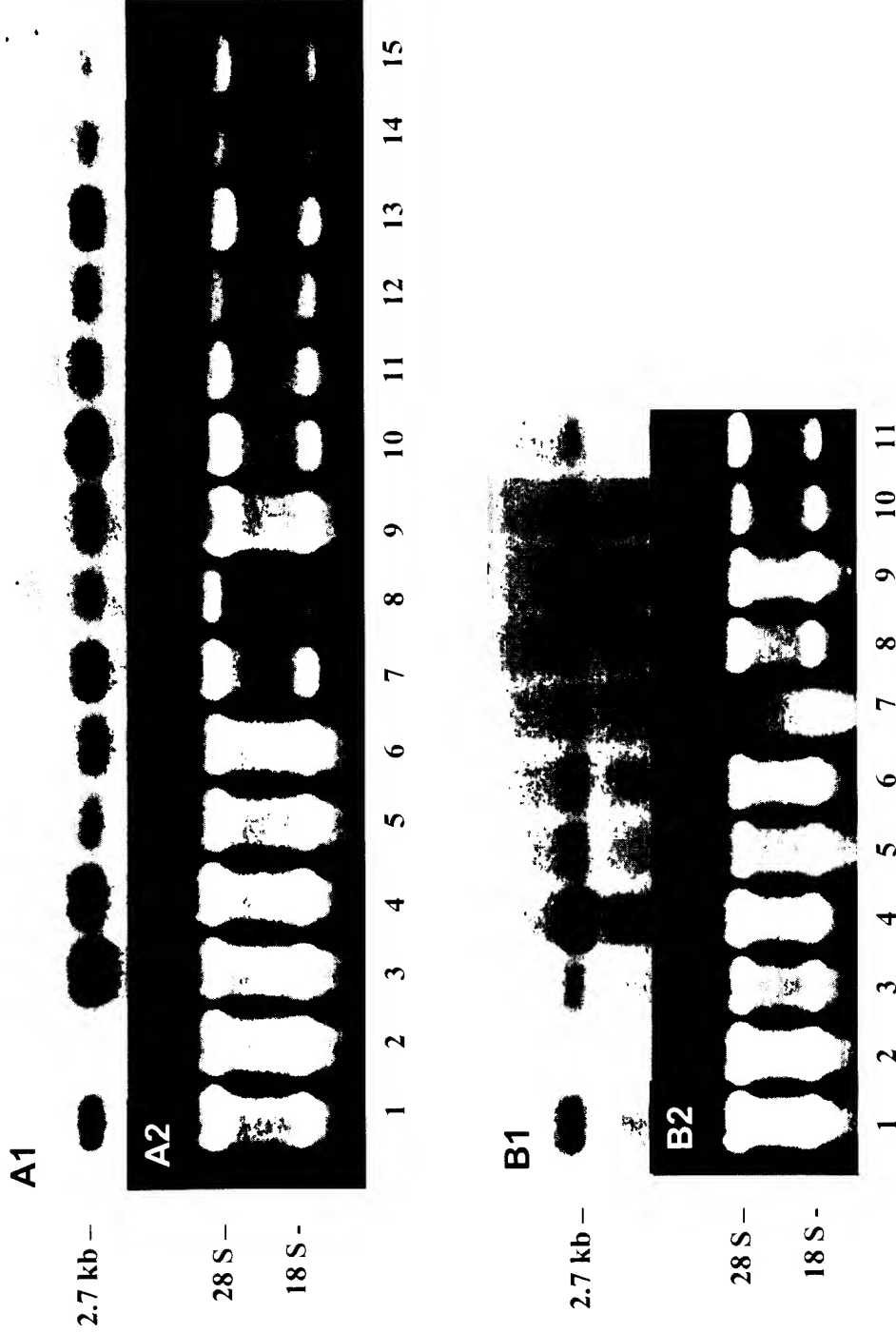


FIGURE 4

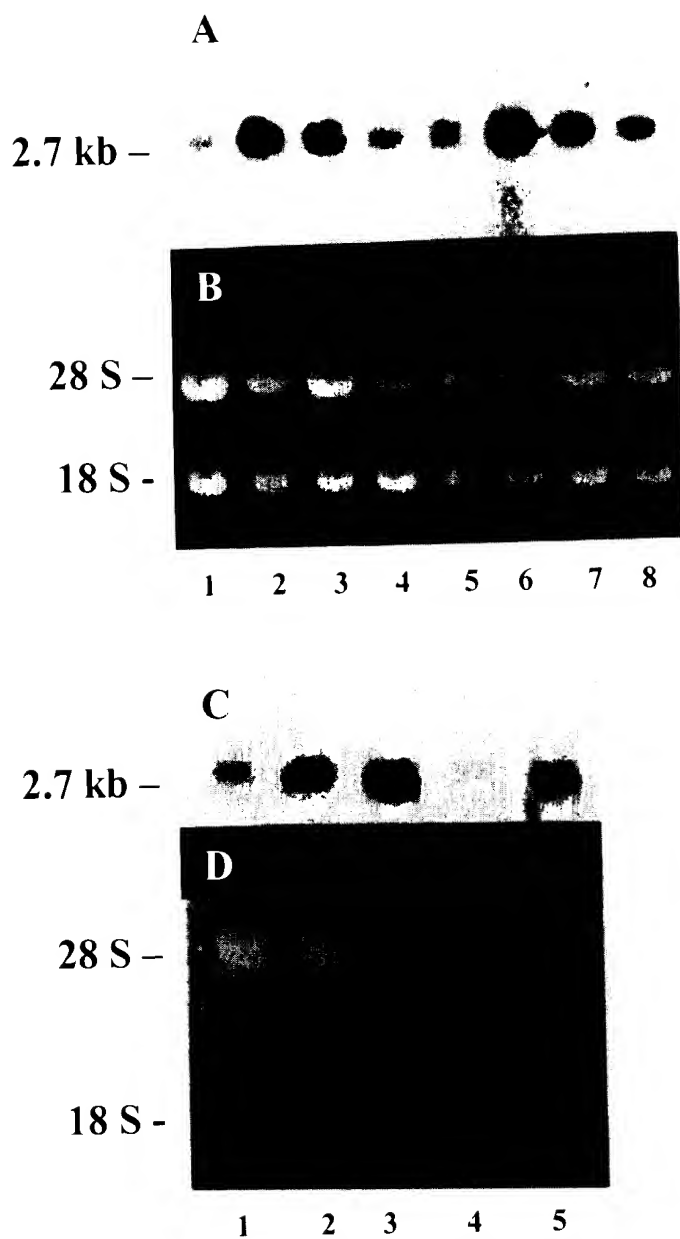


FIGURE 5



FIGURE 6

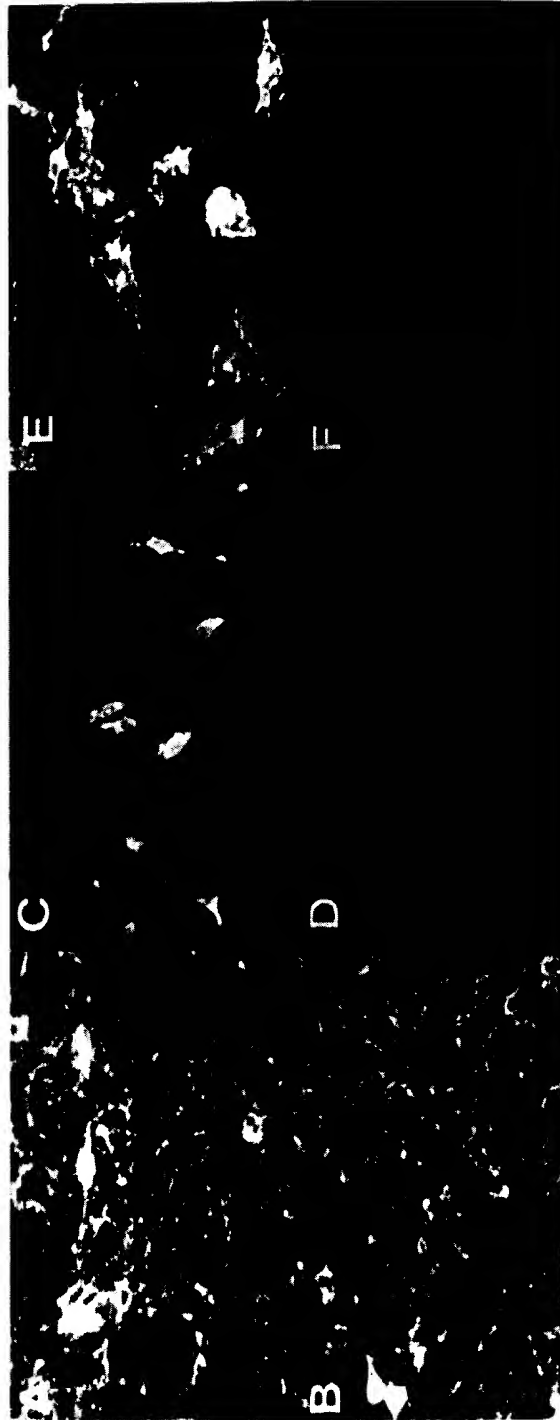


FIGURE 7

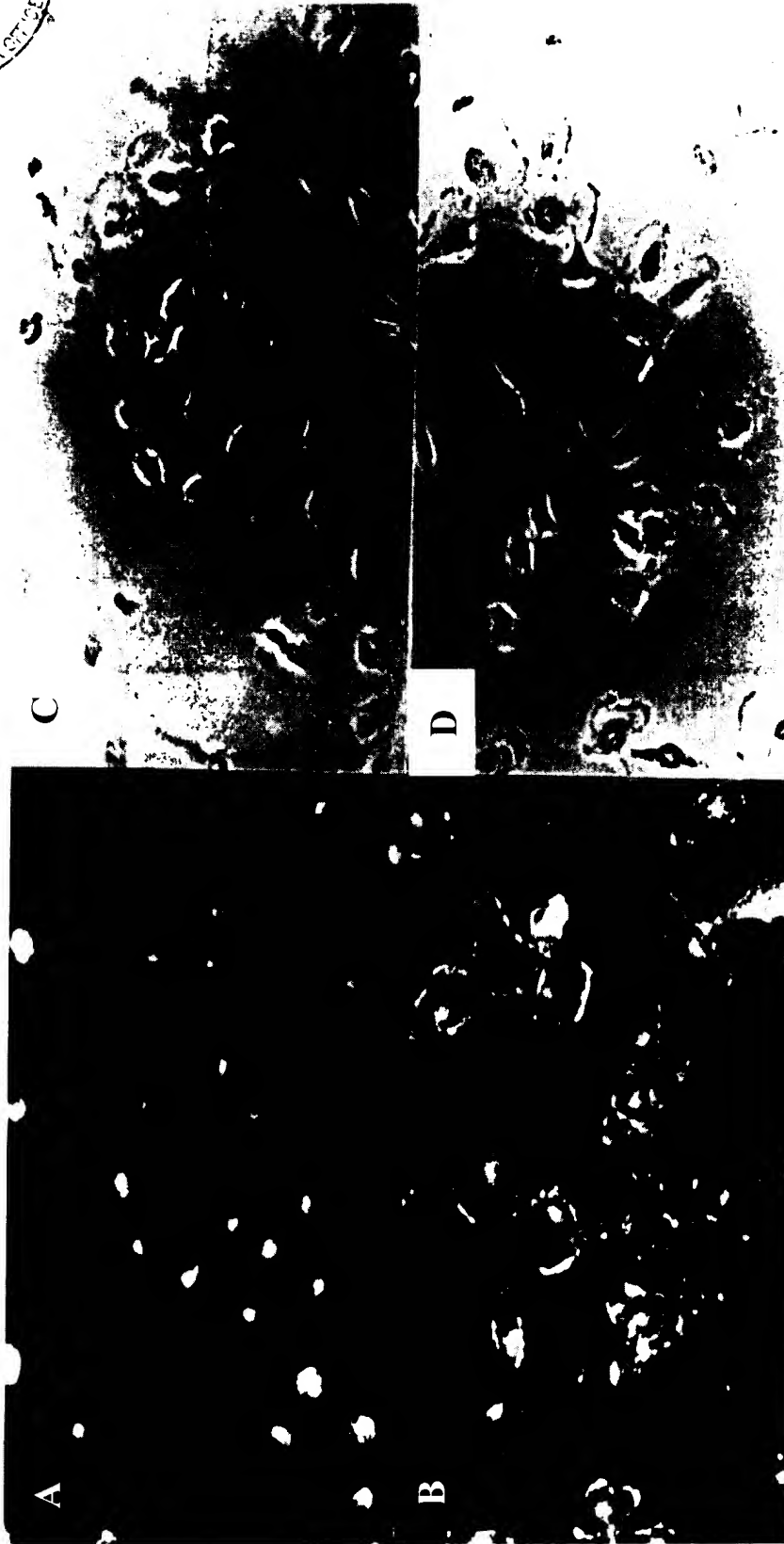


FIGURE 8

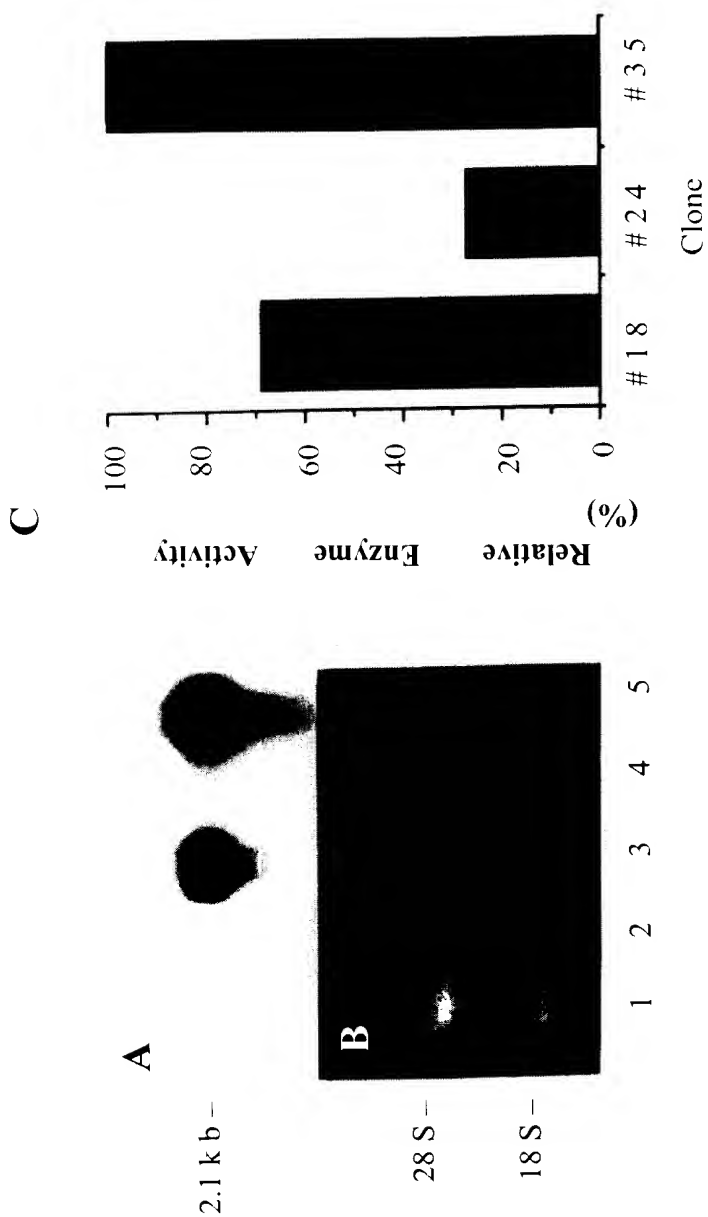
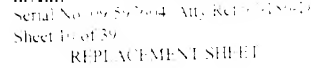


FIGURE 9



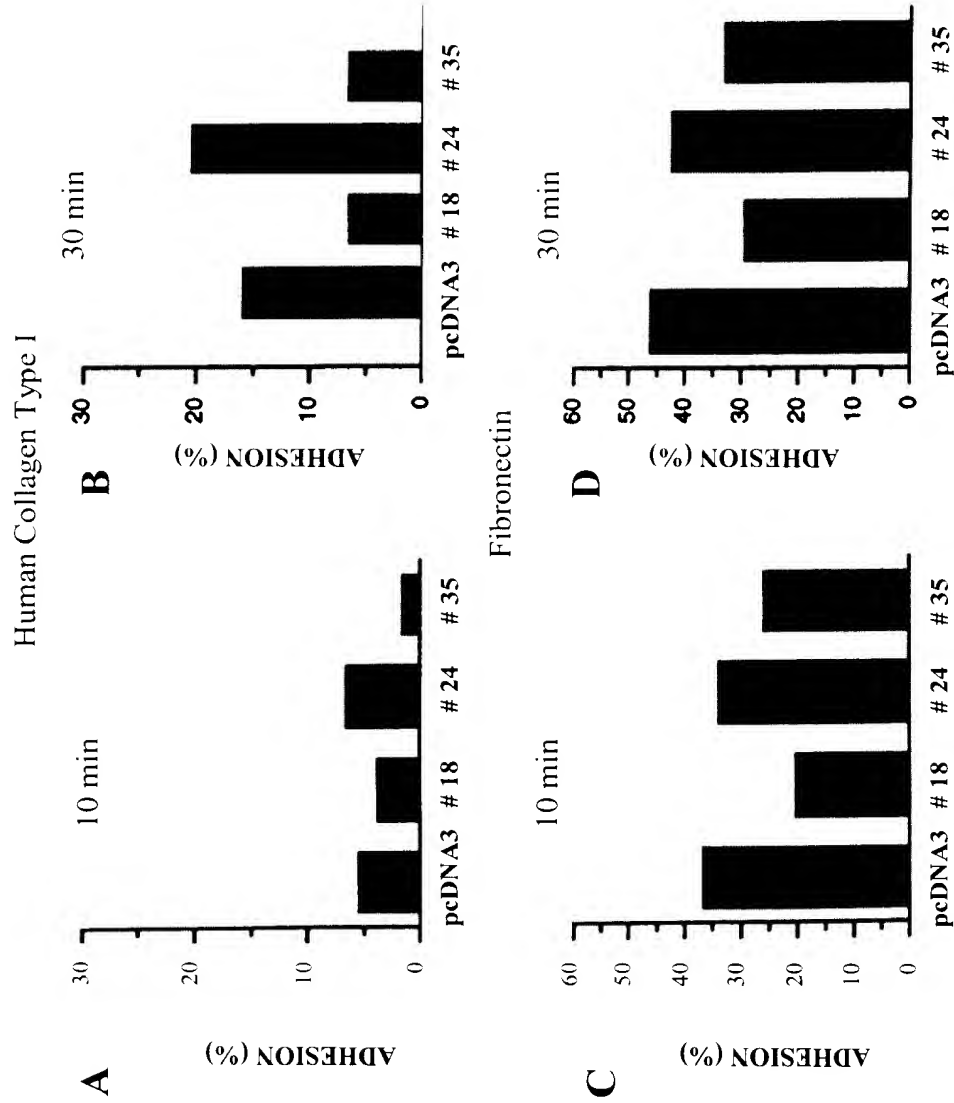


FIGURE 11

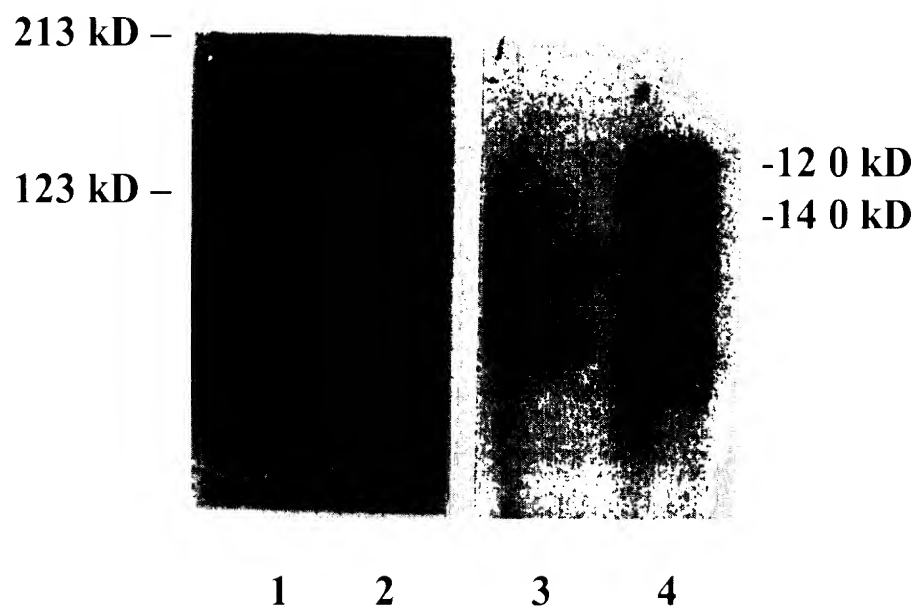


FIGURE 12

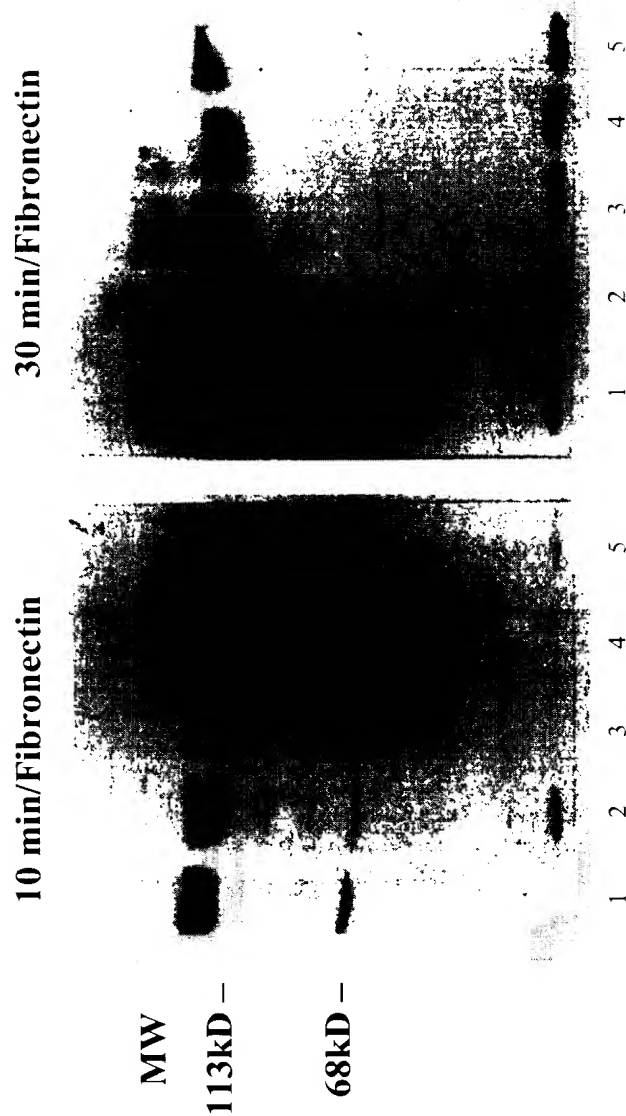


FIGURE 13

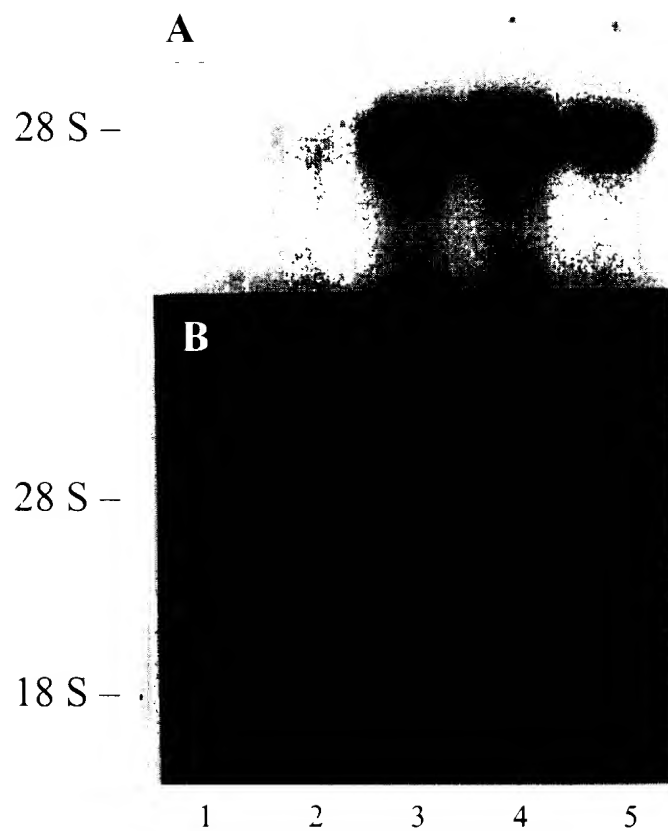


FIGURE 14



FIGURE 15

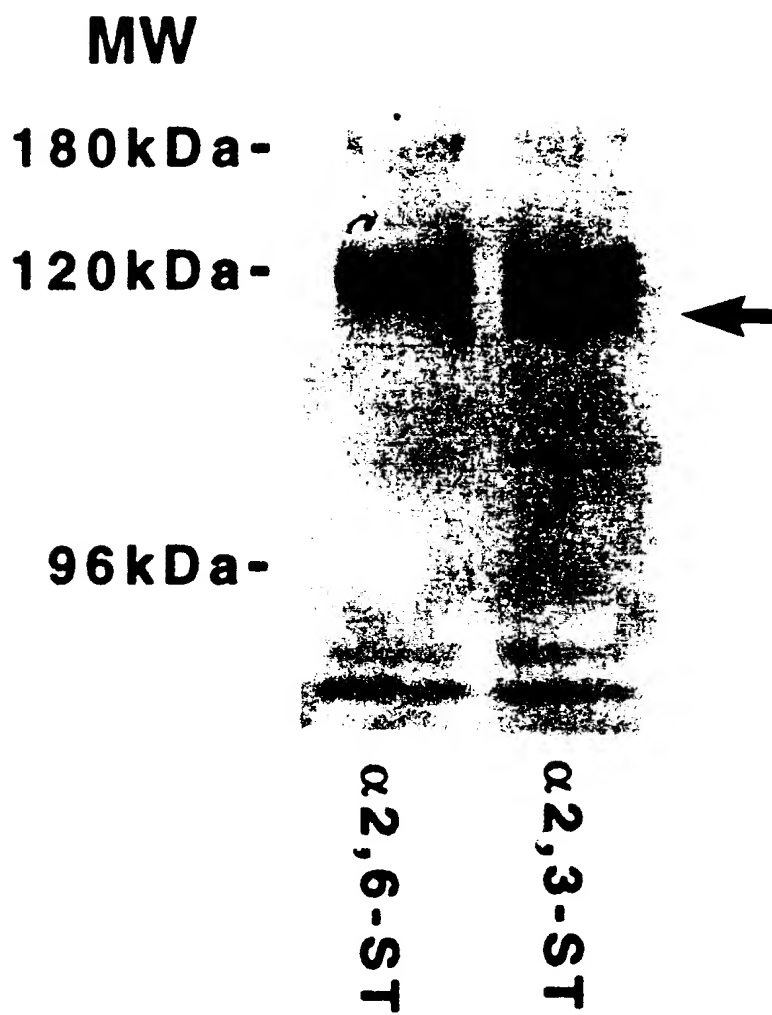




FIGURE 16



FIGURE 17

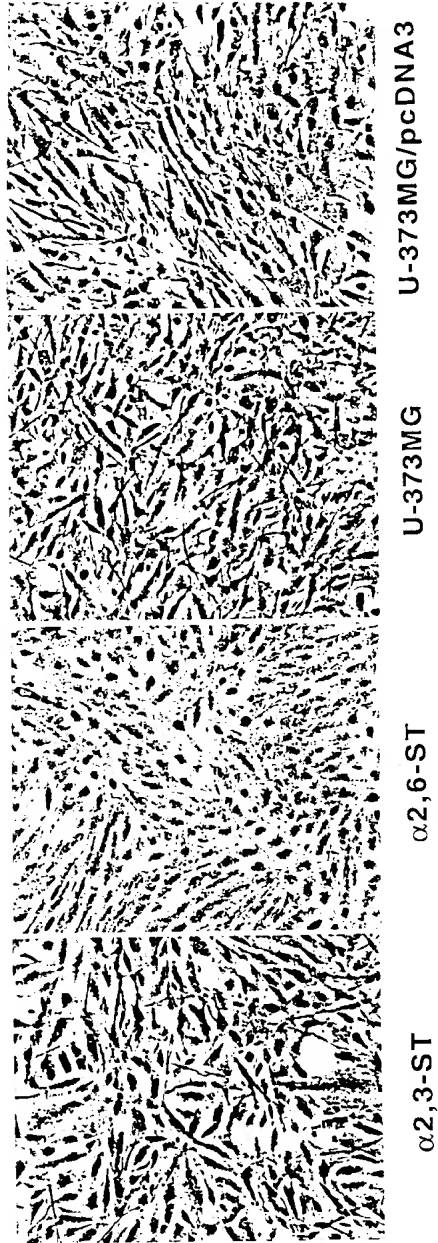
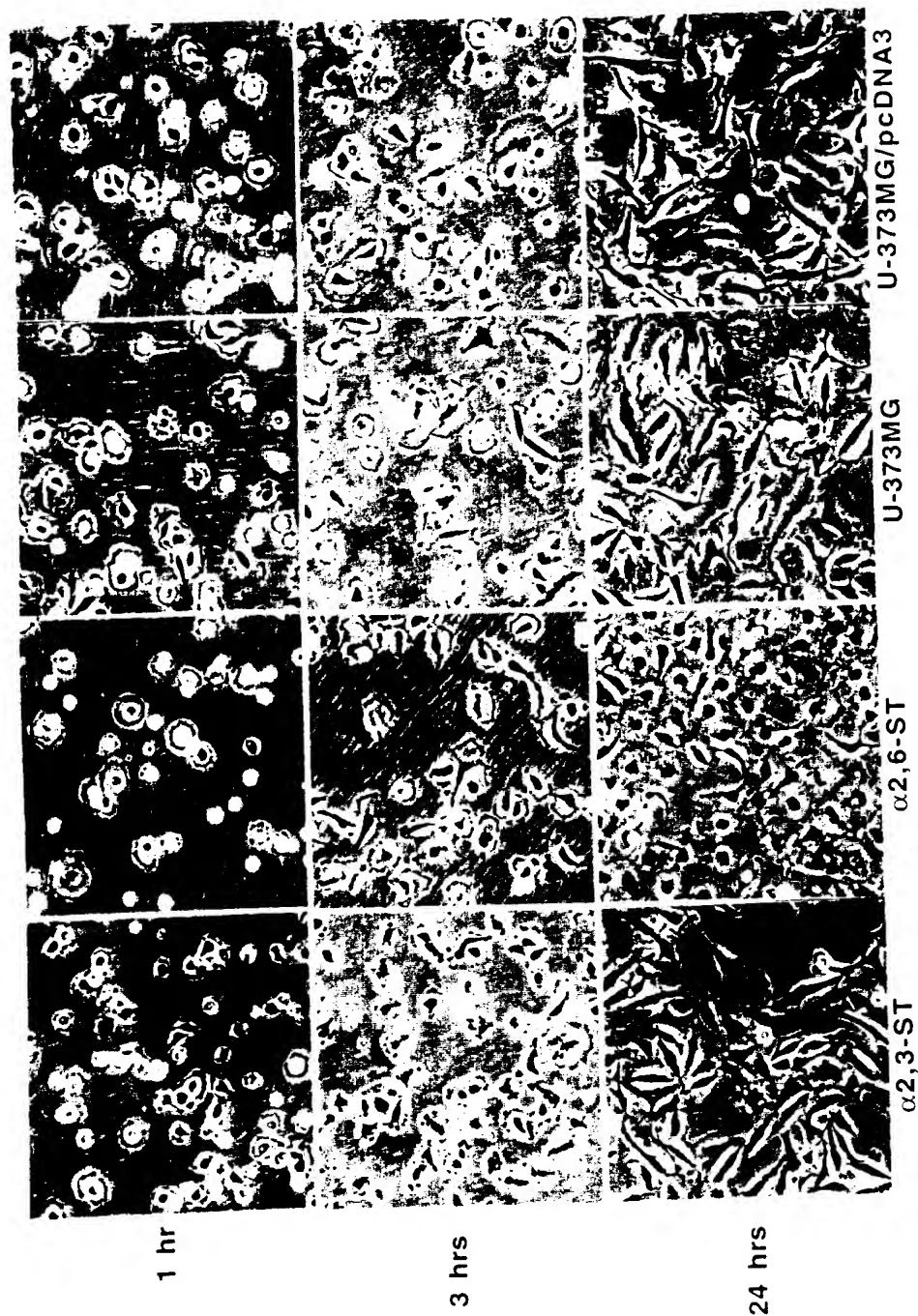




FIGURE 18



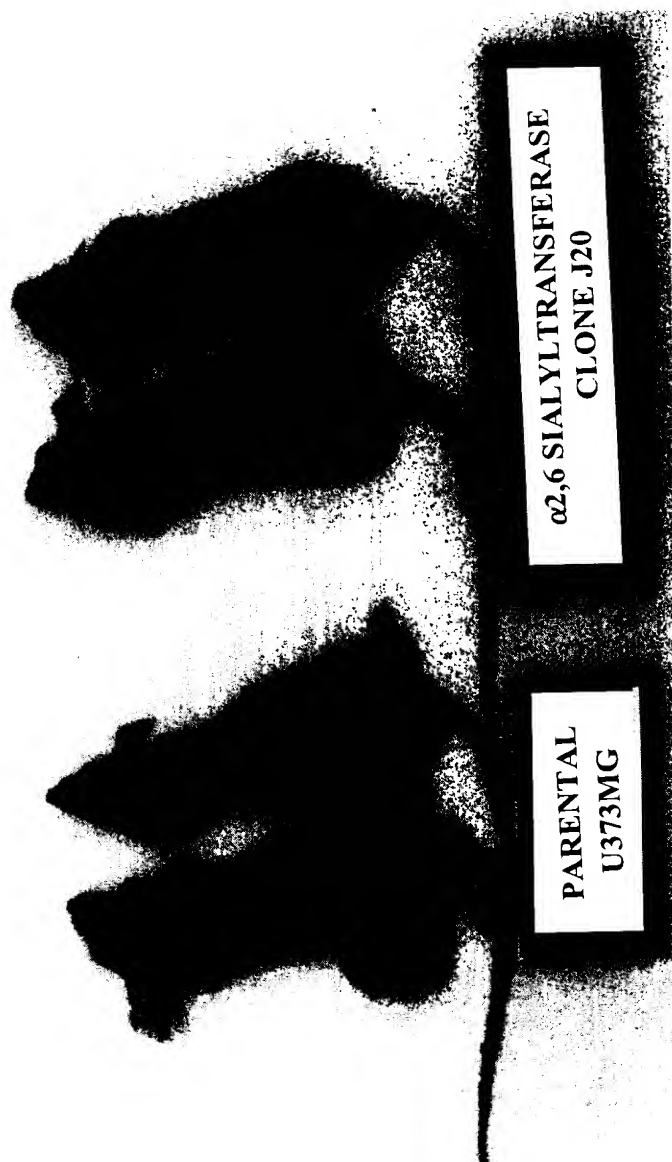


FIGURE 19



FIGURE 20

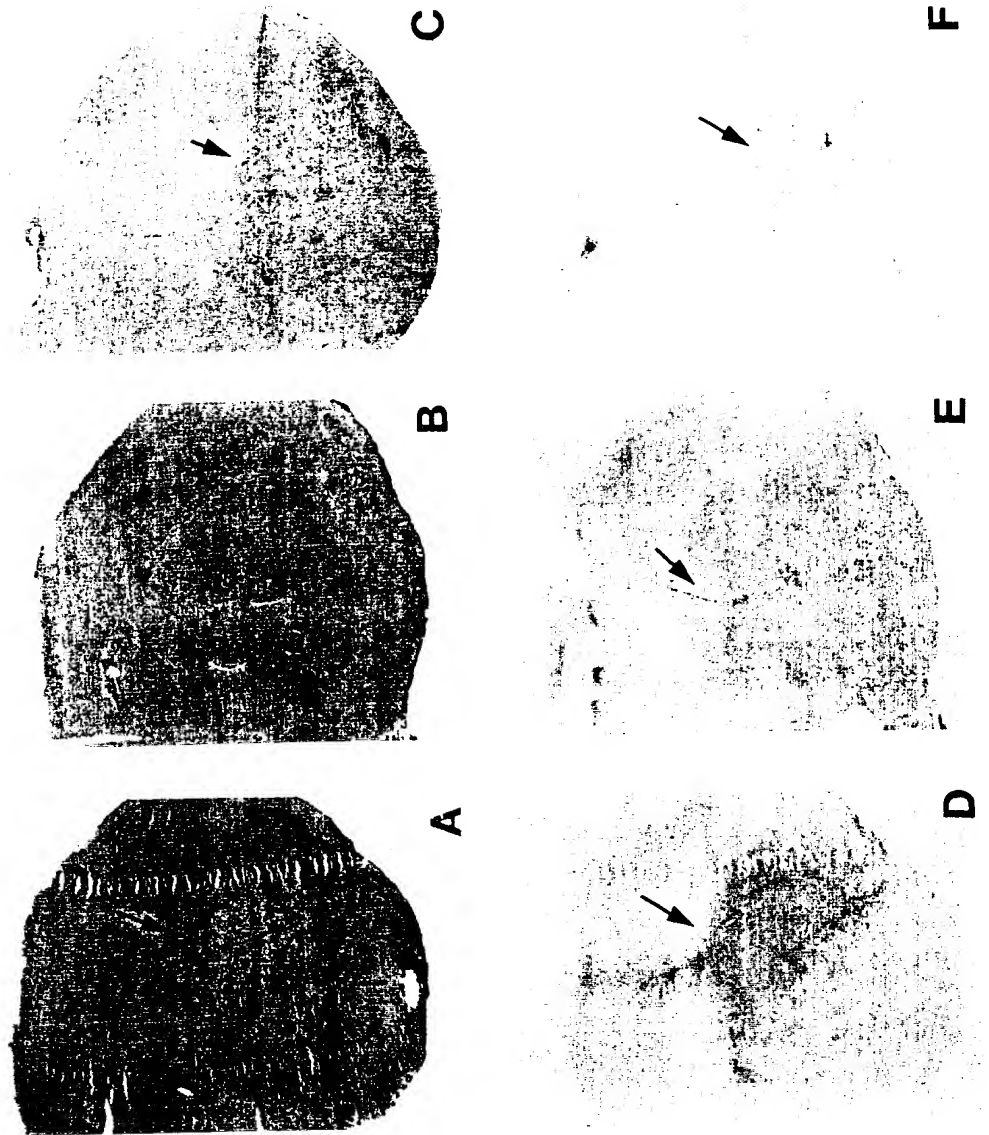
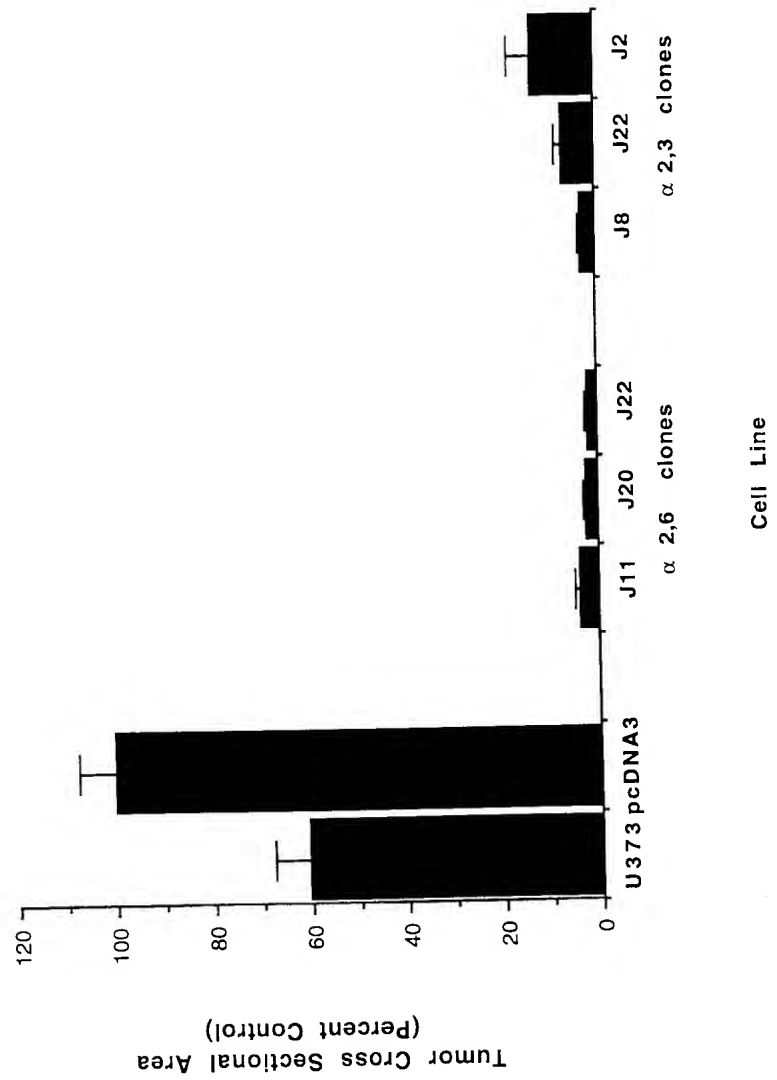




FIGURE 21



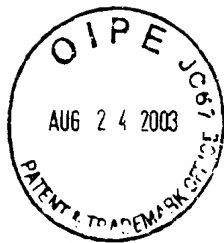


FIGURE 22

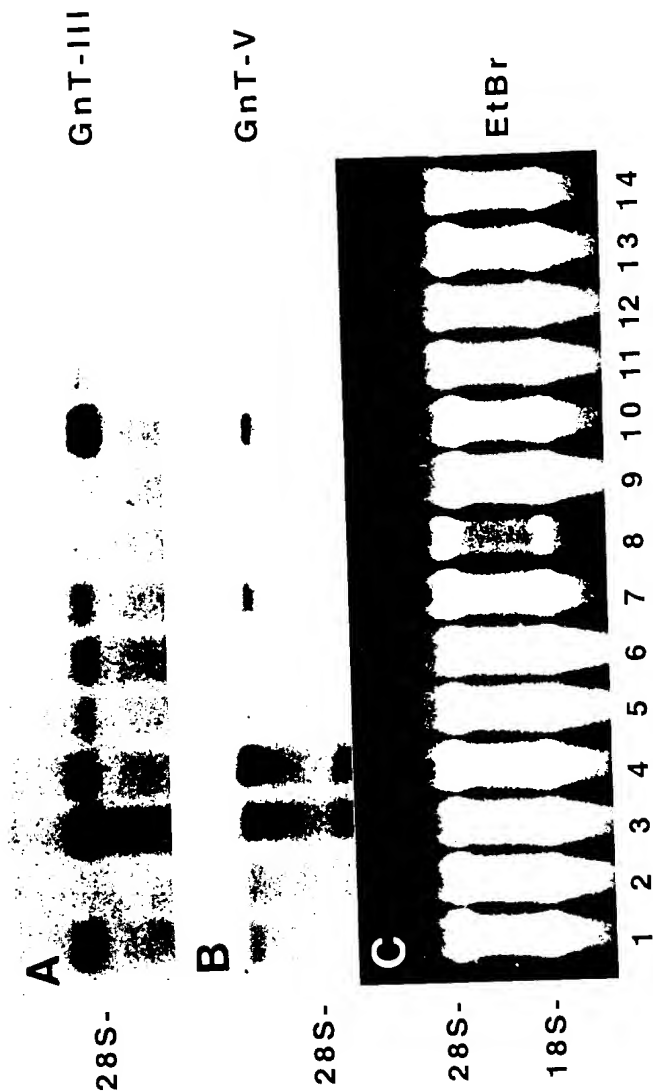




FIGURE 23





FIGURE 24





FIGURE 25

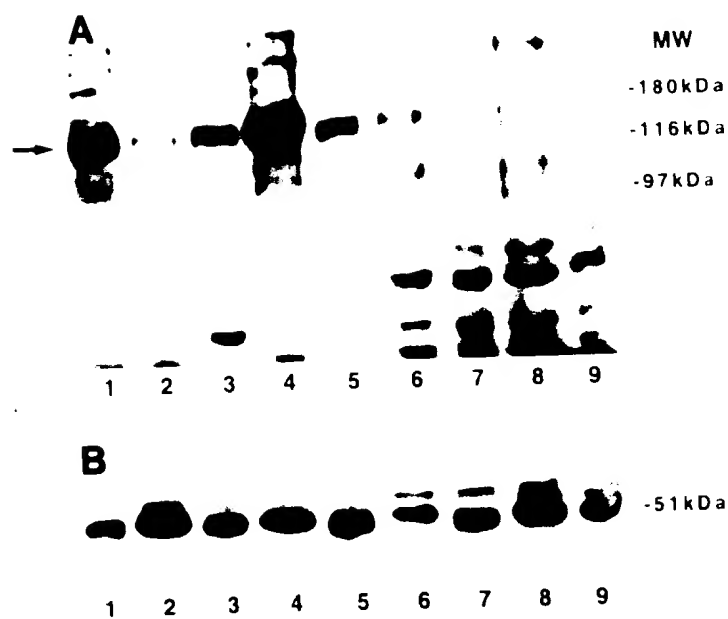




FIGURE 26

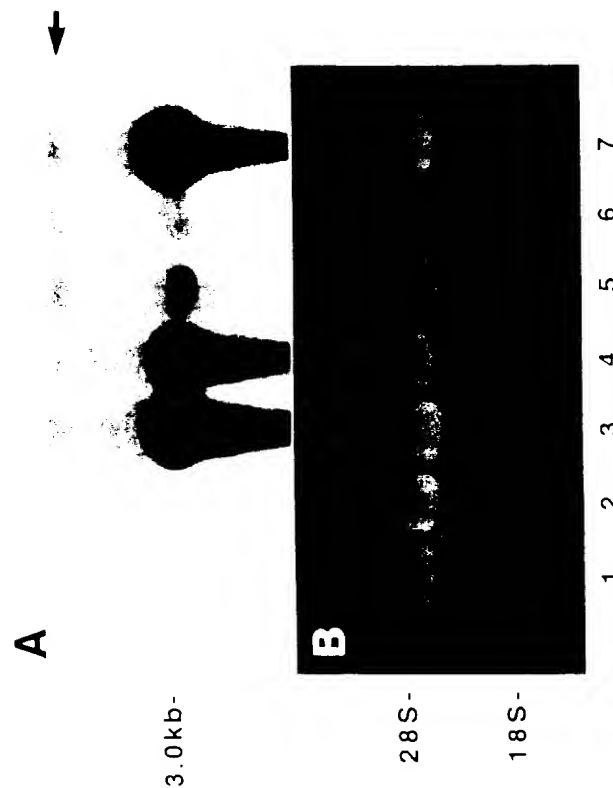




FIGURE 27

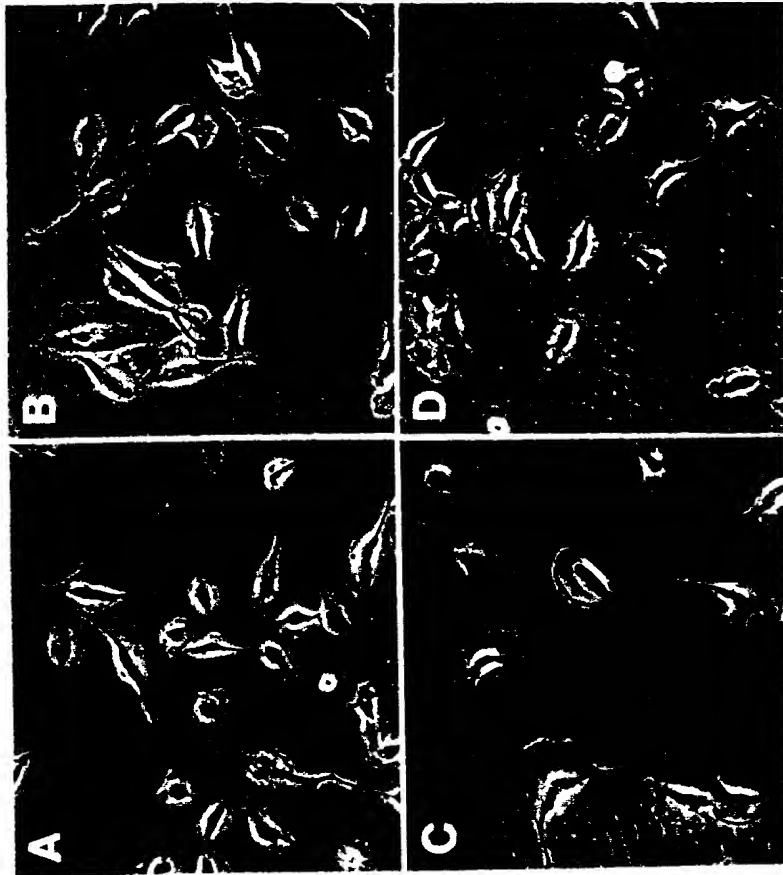
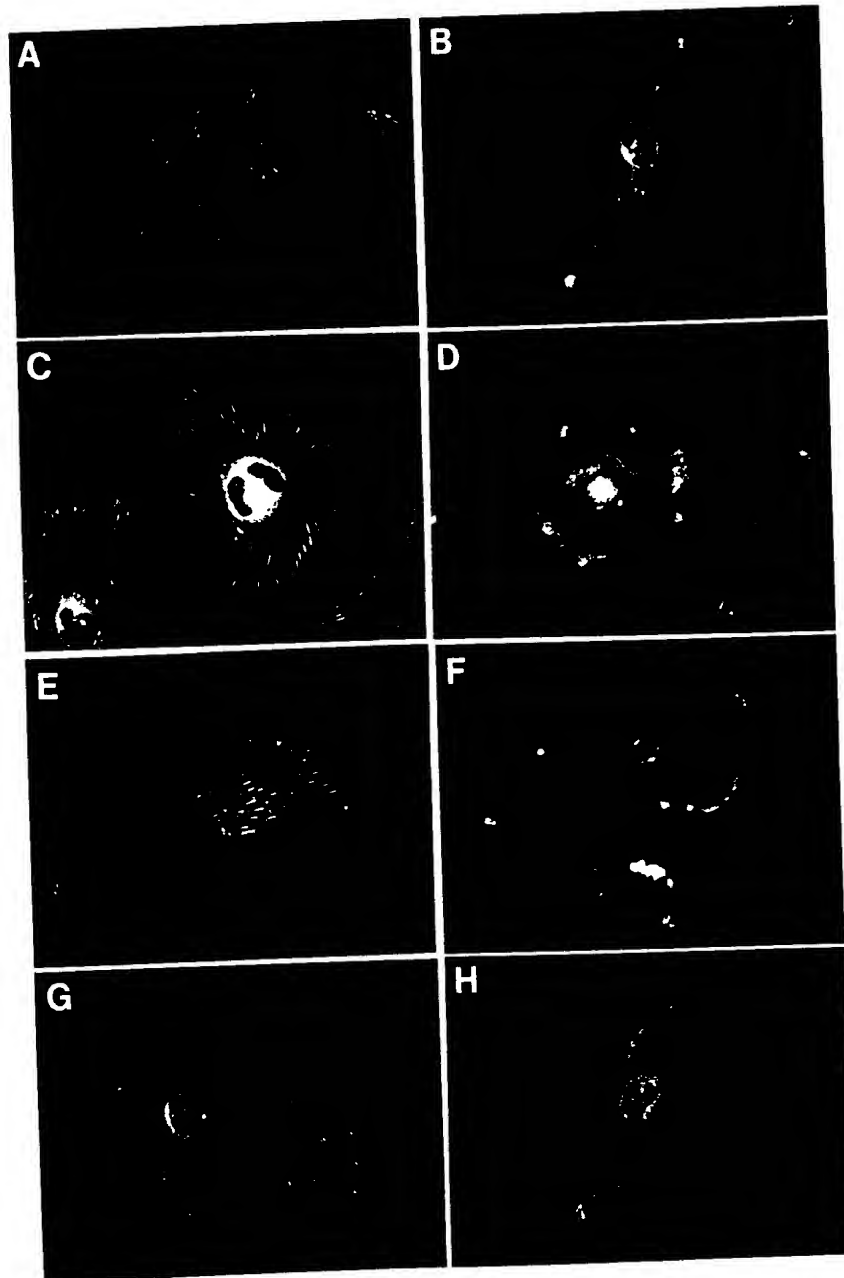




FIGURE 28



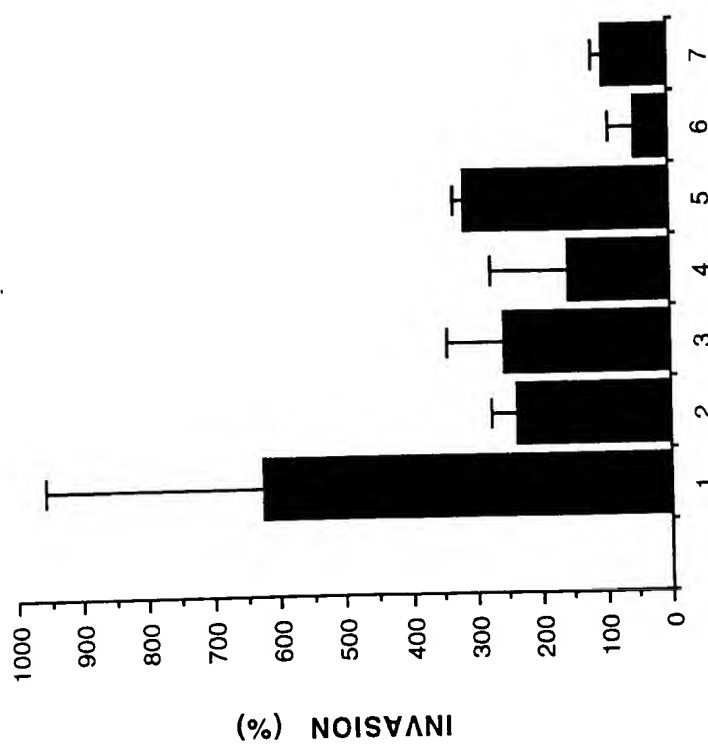
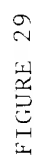
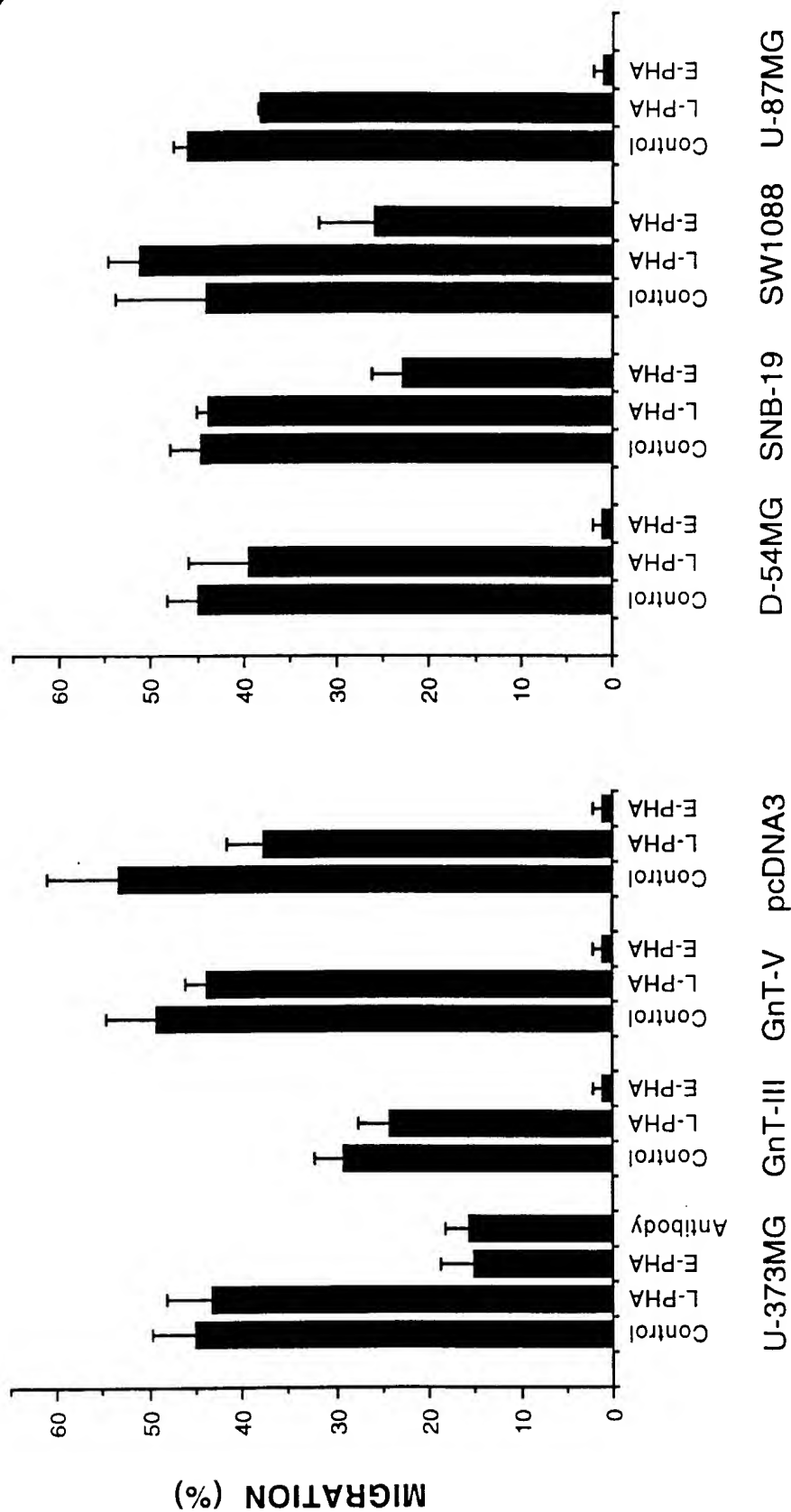
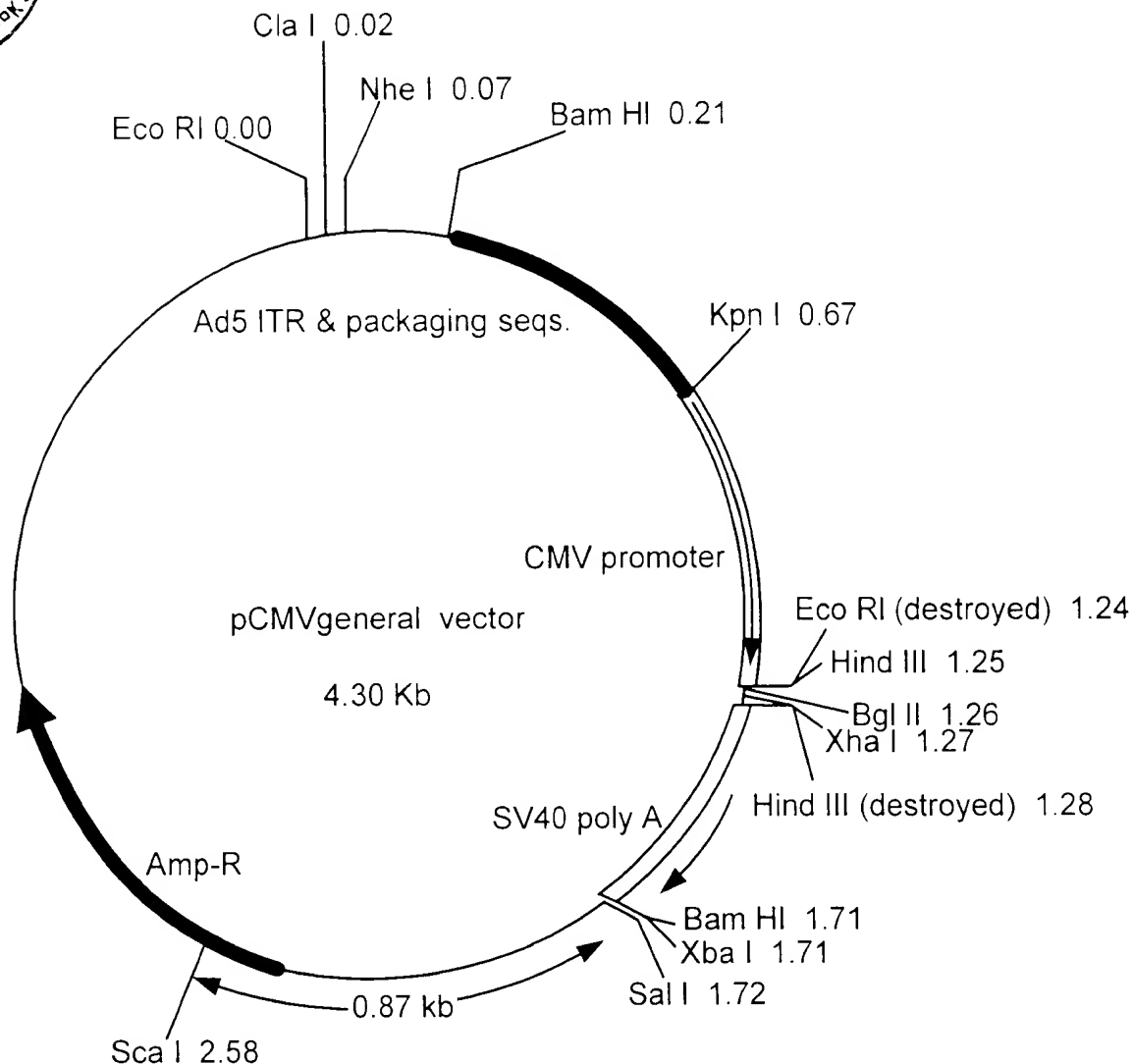




FIGURE 30





Plasmid name: pCMVgeneral vector

Plasmid size: 4.30 kb

Constructed by: Swaminathan

Construction date: June 1993

Comments/References: Starting plasmid was pCMVE4 6/7. The E4 6/7 seqs. were removed by cutting with Hind III (@1.97) and Eco RI (@1.24) and replaced with an oligo carrying Hind III, Bgl II and Xho I. The original Hind III & Eco RI sites are destroyed in this construct.

FIGURE 31A



FIGURE 31B

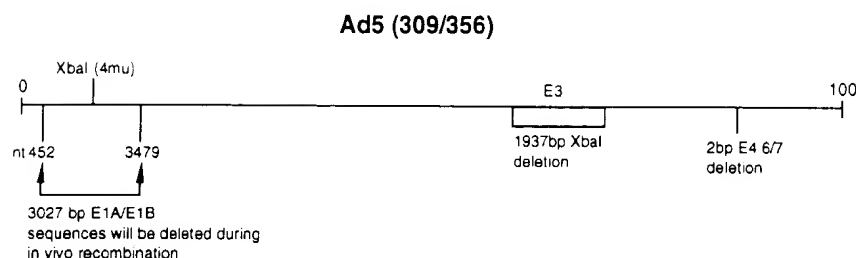


FIGURE 31C



Construction of adenoviral vector. A recombinant adenoviral vector expressing α 2,6ST was constructed using the parental virus Ad5 (309/356) shown in Panel A. Panel B indicates the insertion of the α 2, 6ST expression cassette into the E1a region of the parental genome as described in Materials and Methods. Elimination of the E1a region renders the new adenoviral construct replication incompetent



2.1 KB -

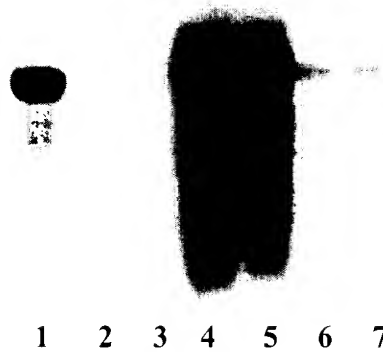
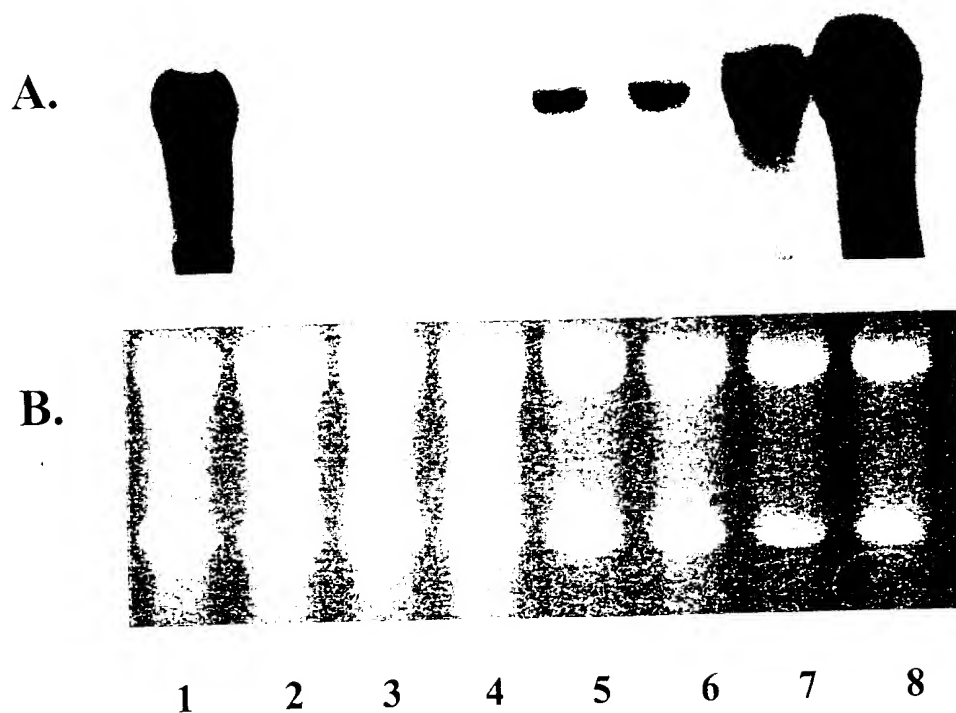


FIGURE 32



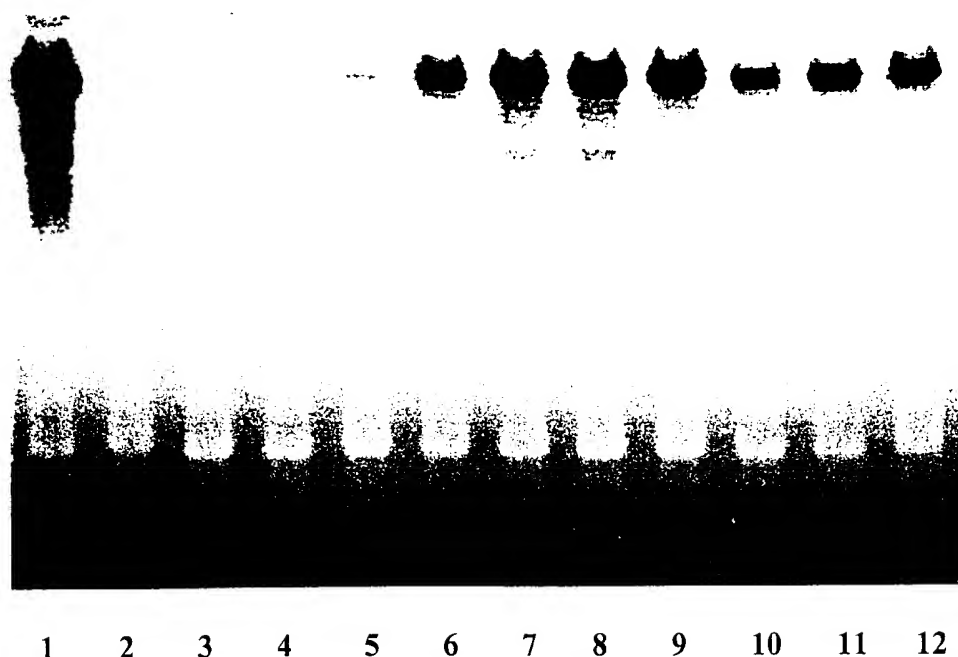
FIGURE 33



Dose-dependent expression of $\alpha 2,6$ -ST mRNA in U-373MG cells. Lane 1: U-373MG cells 48 hours following infection with crude Ad $\alpha 2,6$ -ST virus; lane 2: U-373MG cells with no virus; lanes 3-8: U-373MG cells 48 hours following infection with, respectively, 0.02, 0.2, 2.0, 10.0, 20.0, and 200 plaque-forming units (pfu)/cell of plaque-purified Ad $\alpha 2,6$ -ST59.



FIGURE 34

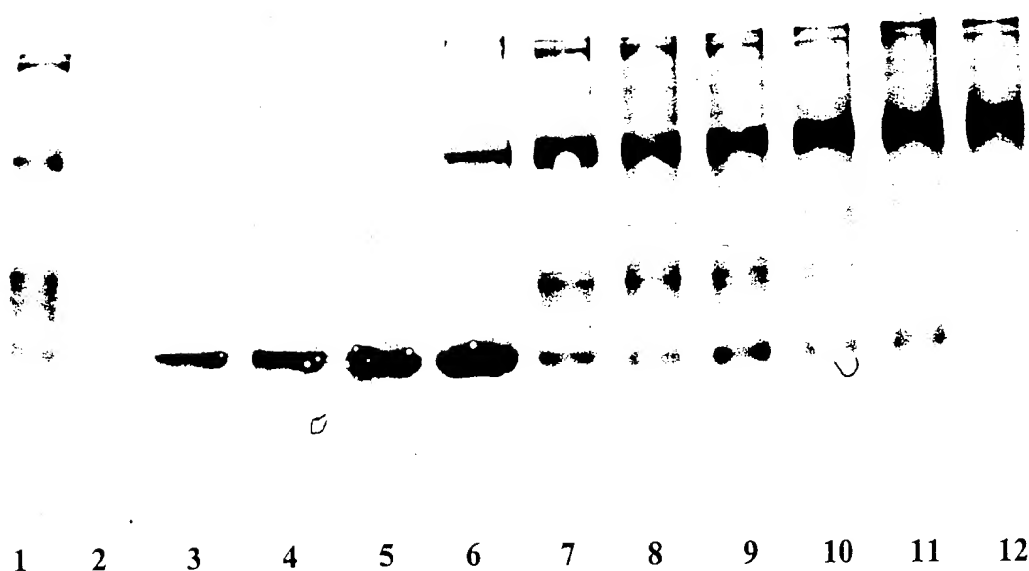


Time-dependent expression of α -2,6-ST mRNA in U-373MG glioma cells.

Lane 1: U-373MG cells stably transfected with α 2,6-ST; lane 2: U-373MG cells with no virus; lane 3: U-373MG cells 3 hours after infection with 10 pfu plaque-purified Ad α 2,6-ST59 / cell; lanes 4 - 13: 6 hours, 12 hours, 1 day, 2 days, 3 days, 4 days, 6 days, 7 days and 8 days after infection.



FIGURE 35

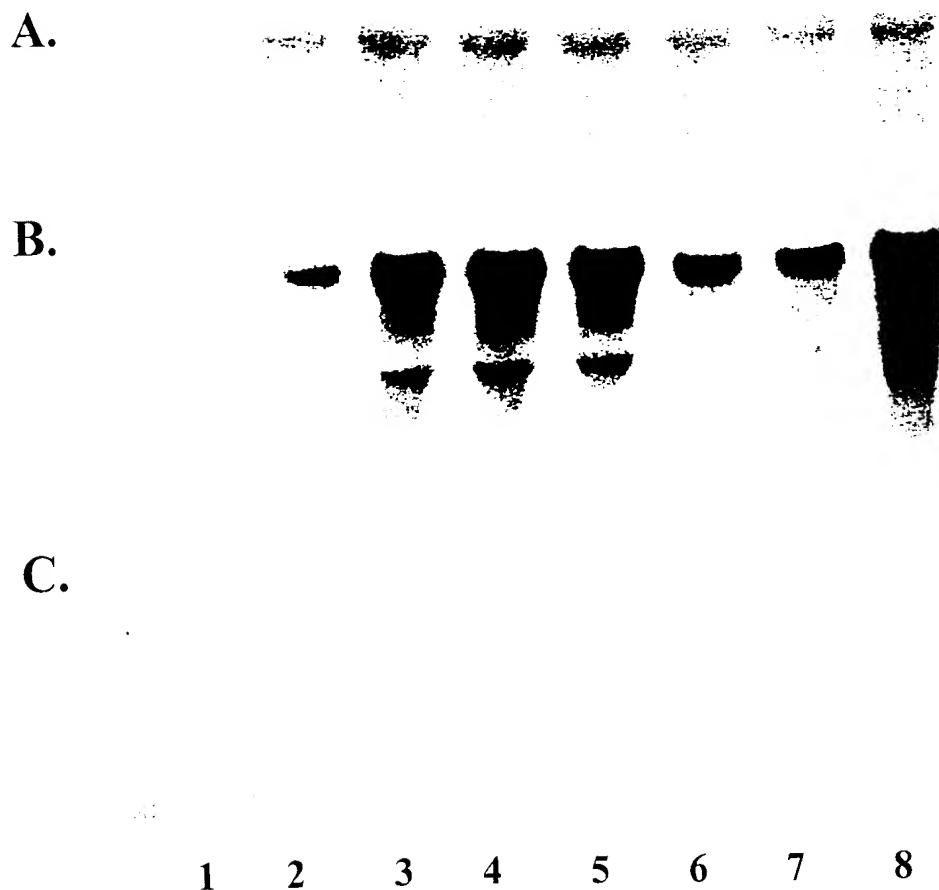


Time-dependent expression of sialoglycoconjugates in U-373MG glioma cells.

5 μ g total protein per lane was run on a 0.8% SDS-PAGE gel, and stained with SNA lectin. Lane 1: U-373MG cells stably transfected with α 2,6-ST gene; lane 2: U-373MG cells with no virus; lane 3: U-373MG cells 3 hours after infection with 10 pfu plaque-purified Ad α 2,6-ST59 /cell; lanes 4 - 12: 6 hours, 12 hours, 1 day, 2 days, 3 days, 4 days, 6 days, 7 days and 8 days after infection.



FIGURE 37

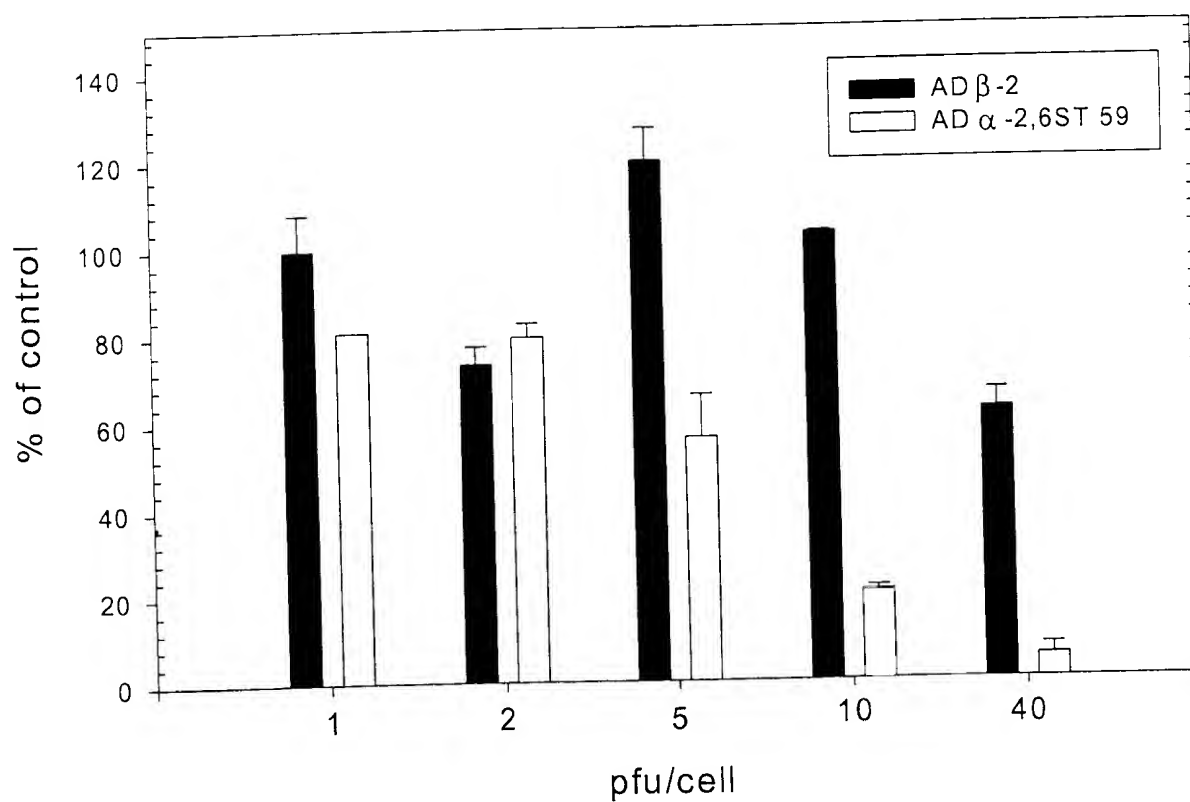


Time-dependent expression of focal adhesion kinase (p125^{fak}) mRNA in Adα2,6-ST59 infected U-373 MG cells.

Northern Blot probed with p125^{fak} cDNA (Panel A). Panel B shows the same blot probed with α2,6-ST cDNA. Ethidium bromide staining (Panel C). Lane 1: U-373MG cells with no virus; lane 2: 1 day after infection with 10 pfu plaque-purified Adα2,6ST59/cell; lanes 3-8: 2 days, 3 days, 4 days, 6 days, 7 days and 8 days after infection with 10 pfu plaque-purified Adα2,6ST59/cell.



FIGURE 38



Inhibition of U-373MG glioma cell invasion by Ad α 2,6-ST59.

U-373MG glioma cells were infected with plaque-purified Ad α 2,6ST59 (grey bars) or a control virus, AdCMV β 2 (black bars). Cells were infected at 1, 2, 5, 10 and 40 plaque-forming units (pfu) per cell and invasion assay performed after a 4 day incubation period. Data is shown as percent invasion of non-virus-infected control U-373MG cells.